



Safer Skies and Commercial Aviation Safety Team (CAST)

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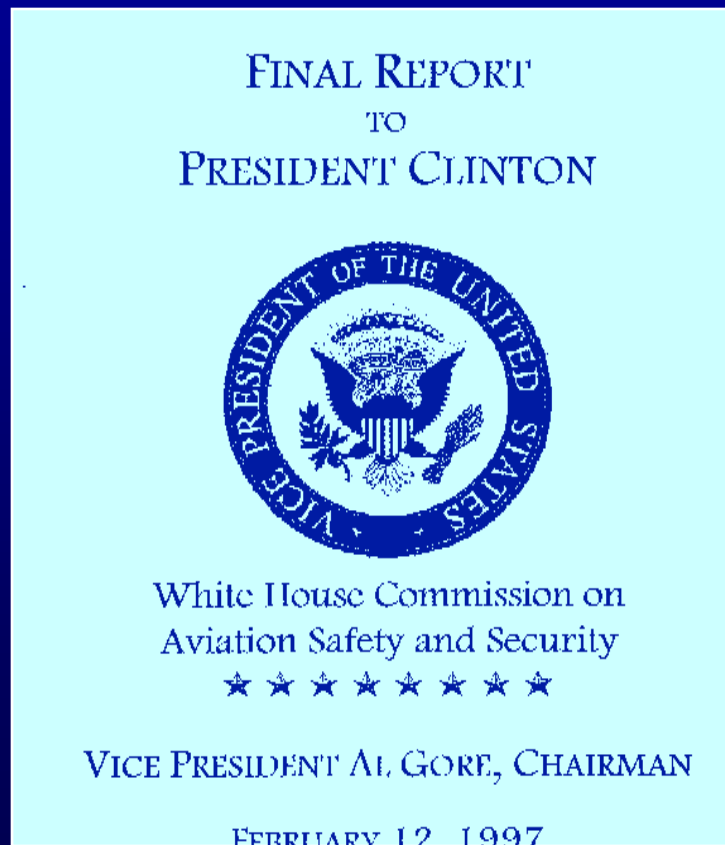
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Icing Conference

Chicago, Il

June 16, 2003

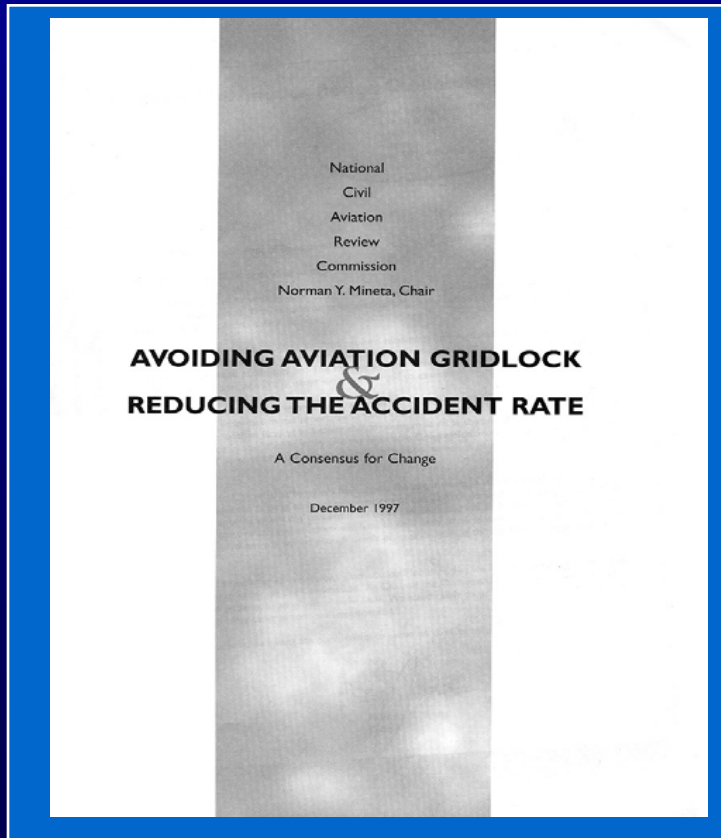
In the U.S., our focus was set by the White House Commission on Aviation Safety



- 1.1 Government and industry should establish a national goal to reduce the aviation fatal accident rate by a factor of five within ten years and conduct safety research to support that goal
- 1.2 The FAA should develop standards for continuous safety improvement, and should target its regulatory resources based on performance against those standards

The National Civil Aviation Review Commission (NCARC)

on Aviation Safety Provided Additional Direction



- FAA and the aviation industry must develop a strategic plan to improve safety, with specific priorities based on objective, quantitative analysis of safety information and data
- Government should expand on their programs to improve aviation safety in other parts of the world

Safer Skies

COMMERCIAL AVIATION

GENERAL AVIATION

Aeronautical
Decisionmaking

Loss of Control

Weather

Controlled Flight
Into Terrain

Survivability

Runway Incursions

Controlled Flight
Into Terrain

Loss of Control

Uncontained
Engine Failures

Runway Incursion

Approach and
Landing

Weather

Turbulence

CABIN SAFETY

Passenger Interference

Passenger Seat Belt Use

Carry-on Baggage

Child Restraint

IMPROVED DATA
& ANALYSIS

HUMAN FACTORS
IN OPERATIONS &
MAINTENANCE

CAST

- Ongoing Industry and FAA Safer Skies Initiatives were combined into CAST
- The goals of CAST are to:
 - Reduce the U.S. commercial aviation fatal accident rate by 80% by 2007
 - Work together with airlines, JAA, ICAO, IATA, FSF, IFALPA, other international organizations and appropriate regulatory/ government authorities to reduce worldwide commercial aviation fatal accident rate

Commercial Aviation Safety Team (CAST)

Industry

AIA

Airbus

ALPA

APA

ATA

NACA

Boeing

P&W*

RAA

FSF

IATA

AAPA

ATAC

APFA

Government

DOD

FAA

- Aircraft Certification
- Flight Standards
- System Safety
- Air Traffic Operations
- Research

NASA

ICAO

JAA

TCC

NATCA

Commercial Aviation Safety Team (CAST)

*Representing GE and RR

Commercial Aviation Safety Team (CAST)

CAST

Joint Safety Analysis Teams (JSAT)

- Data analyses

Joint Safety Implementation Teams (JSIT)

- Safety
enhancement
development

Joint Implementation Measurement Data Analysis Team (JIMDAT)

- Master safety plan
- Enhancement
effectiveness
- Future areas of study

Integrated Strategic Safety Plan

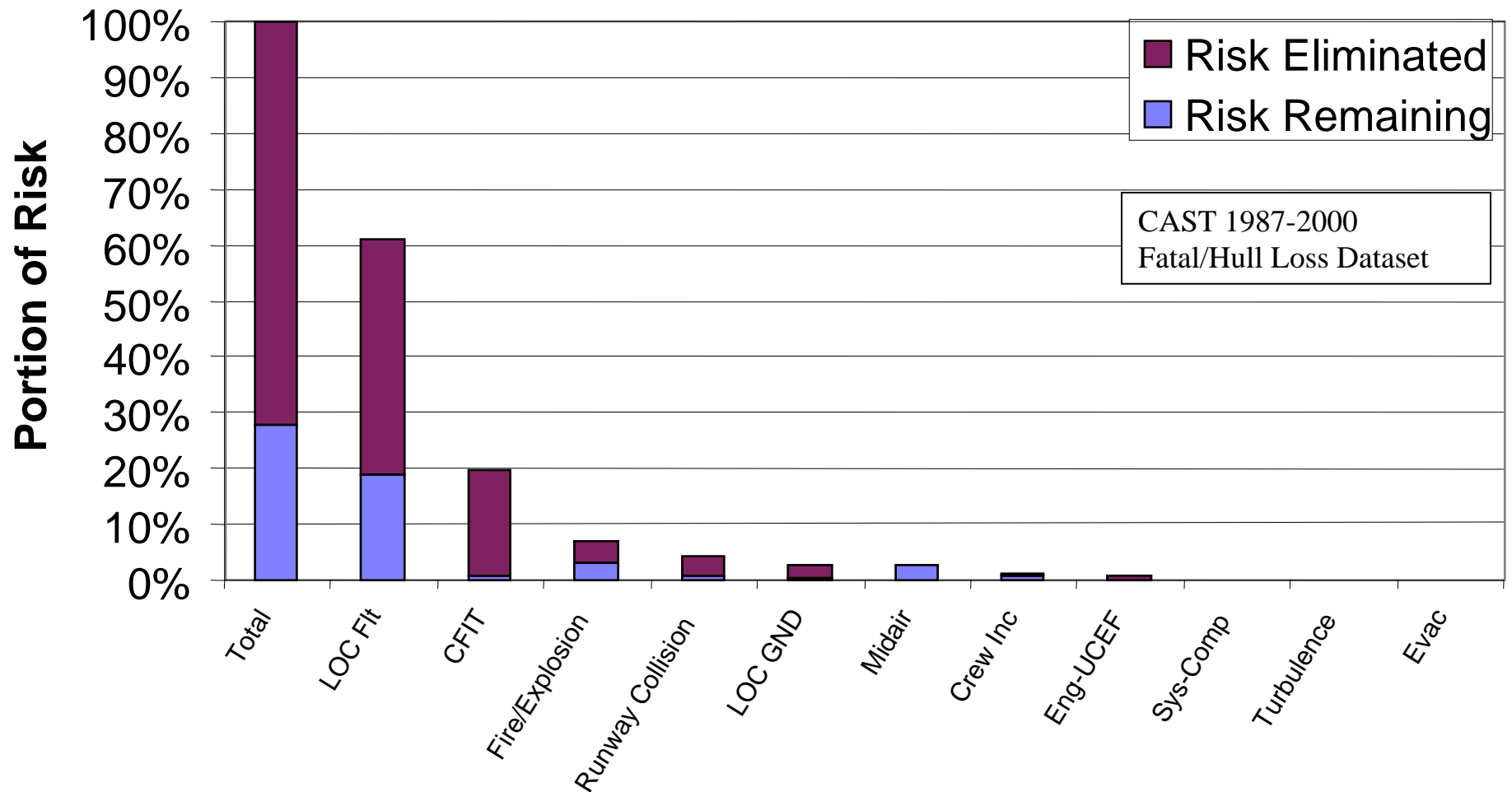
- Developed using the JIMDAT approach
- Contains 46 safety enhancements optimized to include those actions with the best effectiveness vs. resource relationships
- 21 complete/25 committed and underway
- Initially combines short-term “liveware”-based enhancements with transition to design change enhancements long term
- Foundation for U.S-driven continuous improvements in worldwide aviation safety

Icing Related Safety Enhancement

- Safety Enhancement #39: Loss of Control (Basic Airplane Design: Icing)
 - Recommend and support development of amended icing certification criteria (for new airplane designs not equipped with evaporative ice protection systems) that include performance and handling requirements for:
 - Residual ice
 - Intercycle ice
 - Delayed ice protection system activation
 - Ice protection system malfunction

Hull Loss & Fatal Accidents

Portion of Total Fatality Risk Mitigated by the CAST Plan (2007 Implementation Values)



Remaining Risk JSAT

- Chartered to study areas of remaining risk, including icing
- First three meeting completed
- Icing Sub-team
 - Study icing related accidents
 - Complete prioritization of Loss of Control icing related interventions
 - Utilize FAA Icing Plan in the development of final interventions

Safety Metrics

- Purpose: Determine if the program is resulting in desired risk reduction. Identify issues needing more detailed analysis if desired result is not occurring.
- Assumption: Measurement of accident rate is not effective means of identifying program success.
- Use reporting systems currently in existence (ex: FOQA, Partnership programs, SDR, NAOMS, etc.).
- Direct link is through the problem statements identified by data analysis:
 - Identify events that reflect the problem
 - Identify available method for measuring the event frequency
 - Establish event baseline
 - Identify trend

Conclusions

- CAST has an effective data driven process
- CAST has become the model for Industry/Government consensus building on safety
- CAST brings together all the key players
 - Air Carriers
 - Manufacturers
 - Employee Groups
 - Government
- Predicted 73% risk reduction from current plan
- Industry is voluntarily implementing CAST recommendations
- World-wide leadership
- Need your support to shape the future